CLAIMS

What is claimed is:

1   1.   A method of collecting network management information from a plurality of network

2   devices in a network management system, the method comprising the computer-

3   implemented steps of:

4   configuring said network management system to acquire data from said

5   network devices based on a user-definable operational specification;

6   querying said network devices for data to form a set of acquired data in

7   accordance with said operational specification;

8   transforming said acquired data to form a set of transformed data in

9   accordance with said operational specification; and

10   storing said transformed data to an information base to form a set of stored

11   data in accordance with said operational specification.

1   2.   A method as recited in Claim 1, wherein said operational specification is defined in an

2   Extensible Markup Language file.

1   3.   A method as recited in Claim 1, wherein said operational specification includes a

2   scheduling block to direct said network management system to operate at a preset

3   point in time.

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1   4.   A method as recited in Claim 1, wherein the step of querying said network devices

2   includes using a network communication protocol that is defined in said operational

3   specification for each of said network devices.

1   5.   A method as recited in Claim 1, wherein the step of transforming said acquired data

2   includes performing at least one arithmetic transformation on said acquired data,

3   wherein said arithmetic transformation is specified by said operational specification.

1   6.   A method as recited in Claim 1, further comprising the step of monitoring said

2   acquired data, said transformed data and said stored data for compliance with at least

3   one threshold criterion specified by said operational specification.

1   7.   A method as recited in Claim 6, further comprising the step of generating a

2   notification when any of said acquired data, said transformed data and said stored data

3   complies with said threshold criterion.

1   8.   A method as recited in Claim 1, further comprising the step of aggregating said stored

2   data to form a set of trending data by performing at least one arithmetic aggregation

3   on said stored data, wherein said arithmetic aggregation is specified by said

4   operational specification.

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1 9. A method as recited in Claim 1, further comprising the step of removing a quantity of

2   said stored data from said information base in accordance with information in said

3   operational specification.

1 10. A method of collecting and aggregating network management information from a

2   plurality of network devices in a network management system, the method comprising

3   the computer-implemented steps of:

4   configuring said network management system to acquire data from said

5   network devices based on a user-definable operational specification;

6   querying said network devices for data to form a set of acquired data in

7   accordance with said operational specification;

8   transforming said acquired data to form a set of transformed data in

9   accordance with said operational specification;

10   storing said transformed data to an information base to form a set of stored

11   data in accordance with said operational specification; and

12   aggregating said stored data to form a set of trending data by performing at

13   least one arithmetic aggregation on said stored data, wherein said

14   arithmetic aggregation is specified by said operational specification.

1 11. A method as recited in Claim 10, wherein said operational specification is defined in

2   an Extensible Markup Language file.

1   12.   A method as recited in Claim 10, wherein said operational specification includes a

2   scheduling block to direct said network management system to operate at a preset

3   point in time.

1   13.   A method as recited in Claim 10, wherein the step of querying said network devices

2   includes using a network communication protocol that is defined in said operational

3   specification for each of said network devices.

1   14.   A method as recited in Claim 10, wherein the step of transforming said acquired data

2   includes performing at least one arithmetic transformation on said acquired data,

3   wherein said arithmetic transformation is specified by said operational specification.

1   15.   A method as recited in Claim 10, further comprising the step of monitoring said

2   acquired data, said transformed data and said stored data for compliance with at least

3   one threshold criterion specified by said operational specification.

1   16.   A method as recited in Claim 15, further comprising the step of generating a

2   notification when any of said acquired data, said transformed data and said stored data

3   complies with said threshold criterion.

1   17.   A method as recited in Claim 10, further comprising the step of removing a quantity

2   of said stored data from said information base in accordance with information in said

3   operational specification.

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1   18.   A method of collecting, aggregating and monitoring network management

2   information from a plurality of network devices in a network management system, the

3   method comprising the computer-implemented steps of:

4   configuring said network management system to acquire data from said

5   network devices based on a user-definable operational specification,

6   wherein said operational specification is an Extensible Markup

7   Language file and includes a scheduling block to direct said network

8   management system to operate at a preset point in time;

9   querying said network devices for data to form a set of acquired data in

10   accordance with said operational specification using a network

11   communication protocol that is defined in said operational

12   specification for each of said network devices;

13   transforming said acquired data to form a set of transformed data, including

14   performing at least one arithmetic transformation on said acquired

15   data, wherein said arithmetic transformation is specified by said

16   operational specification;

17   storing said transformed data to an information base to form a set of stored

18   data in accordance with said operational specification;

19   monitoring said acquired data, said transformed data and said stored data for

20   compliance with at least one threshold criterion specified by said

21   operational specification;

22   generating a notification when any of said acquired data, said transformed data

23   and said stored data complies with said threshold criterion;

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24   aggregating said stored data to form a set of trending data by performing at

25   least one arithmetic aggregation on said stored data, wherein said

26   arithmetic aggregation is specified by said operational specification;

27   and

28   removing a quantity of said stored data from said information base in

29   accordance with information in said operational specification.

1   19.   A computer-readable medium carrying one or more sequences of instructions for

2   collecting network management information from a plurality of network devices in a

3   network management system, which instructions, when executed by one or more

4   processors, cause the one or more processors to carry out the steps of:

5   configuring said network management system to acquire data from a plurality

6   of network devices on a network based on a user-definable operational

7   specification;

8   querying said network devices for data to form a set of acquired data in

9   accordance with said operational specification;

10   transforming said acquired data to form a set of transformed data in

11   accordance with said operational specification; and

12   storing said transformed data to an information base to form a set of stored

13   data in accordance with said operational specification.

1 20.   An apparatus for collecting network management information from a plurality of

2   network devices in a network management system, comprising:

3   means for configuring said network management system to acquire data from

4   said network devices based on a user-definable operational

5   specification;

6   means for querying said network devices for data to form a set of acquired

7   data in accordance with said operational specification;

8   means for transforming said acquired data to form a set of transformed data in

9   accordance with said operational specification; and

10   means for storing said transformed data to an information base to form a set of

11   stored data in accordance with said operational specification.

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1   21.   An apparatus for collecting and aggregating network management information in a

2   network management system, comprising:

3   one or more configuration files for configuring said network management

4   system to acquire data from a plurality of network devices on a

5   network based on a user-definable operational specification;

6   one or more query modules for querying said network devices for data to form

7   a set of acquired data in accordance with said operational specification;

8   one or more transformation modules for transforming said acquired data to

9   form a set of transformed data in accordance with said operational

10   specification;

11   one or more storage modules for storing said transformed data to an

12   information base to form a set of stored data in accordance with said

13   operational specification; and

14   one or more aggregation modules for aggregating said stored data to form a set

15   of trending data by performing at least one arithmetic operation on said

16   stored data, said arithmetic operation specified by said operational

17   specification.

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